

OTS: 60-41,709

JPRS: 4144

28 October 1960

TWENTIETH ANNIVERSARY OF THE PUBLISHING OF THE FIRST
ARTICLE ON THE NATURAL FOCUS OF DISEASES (THE 10TH
CONFERENCE ON PARASITOLOGICAL PROBLEMS)

By Ye. N. Pavlovskiy

- USSR -

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19990723 084

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[Following is the translation of an article by Ye. N. Pavlovskiy entitled "K dvatsatiletiyu opublikovaniya pervoy stat'i o prirodnoy ochagovosti bolezney" (English version above) in Zoologicheskiy Zhurnal (Zoological Journal), Vol 39, No 5, Moscow, May 1960, pages 794-796.]

In October 1959, the USSR Academy of Sciences (Zoological Institute) and the USSR Academy of Medical Sciences (Institute of Epidemiology and Microbiology imeni N. F. Gamaleya) held the 10th Conference on Parasitological Problems. The conference opened in Moscow 22-24 October and ended in Leningrad 26-29 October. One plenary session was held in Moscow and two in Leningrad, 23 sectional meetings were held in Moscow and 17 in Leningrad.

Below is a listing of meetings and papers read, as well as problems touched upon:

The Work of Sections and Sub-Sections

Place of Meetings and number of papers read	Names of Sections & Sub-sections	Number of Meetings
<u>Moscow</u> In the plenary session, 8; in sectional meetings, 245	Virus and rickettsial diseases: Acarid-bite encephalitis and ornithosis nephrosis-nephritis acarid-bite Asian typhus and Marseilles [?] tick fever KV fever	3 1 1 1

	Bacteriological diseases:	
	Plague	8
	Tularemia	2
	Brucellosis and listerellosis	1
	Heptospirosis and acarian spirochoeta	2
	Medical arachno-entomology	2
	Human and mammal helminthiasis	2
	Pathogenic protozoa:	
	Leishmaniasis	1
	Toxoplasmosis	1
	Hematothermal carriers of infections and measures used against them	
	Arachno-entomology:	
	Acarids (ticks)	5
	Blood-sucking dipterons	3
Leningrad In the plenary session, 5; in sectional meet- ings, 125	Parasitological worms and helminthiasis	5
	Protosociology	4

Number and Composition of Participants

	<u>Moscow</u>	<u>Leningrad</u>
Academicians and corresponding members	4	4
Doctors of Sciences	41	30
Candidates of Science	155	181
Assistants - without degrees	283	150
Post-graduate research students	13	24
Students	15	12
Total	513	401

There were present representatives from 81 cities of all Soviet republics, as follows: The USSR Academy of Sciences, the USSR Academy of Medical Sciences, the Lenin All-Soviet Academy of Agricultural Sciences, two branches of the USSR Academy of Sciences, Academies of Sciences from nine Soviet republics, 20 scientific institutions of the USSR Ministry of Agriculture, two universities, 12 teachers' colleges, 20 medical institutions, and 38 scientific and 68 scientific-practical institutions of the USSR Ministry of Public Health.

The 10th Parasitological Conference coincided with the 20th anniversary of the publication of academician E. N. Pavlovskiy's paper which he read at the general meeting of AN USSR (The USSR Academy of Medicine) and in which he laid down the basic principles of the natural focus of infectious diseases. These have been much studied and developed, but have never been the subject of consideration at parasitological conferences.

The 10th Parasitological Conference was dedicated to the study of the natural focus of diseases, which has now extended its influence to the study of plant as well as animal diseases. [See Note] In addition to this principal purpose of the conference, several problems of parasitology were also included. [Note: The reports on the natural focus of plant diseases were forwarded to the 3rd Congress of the All-Soviet Entomological Society.]

The conference was very successful. It should be emphasized that this success was to a large extent due to the publication of two books of almost 400 papers with a general index of 34 printed pages. These two books were published by the Leningrad branch of the USSR-AN publishing division, and were ready within 40 days. At the general meeting of the conference a resolution was passed expressing appreciation and thanks to the directors and workers of the publishing division for their special attention and efforts in getting these two books ready in such a short time.

The famous protozoologist, C. A. Hoare, a member of the Royal Society of London, took part in the conference at the invitation of the USSR Academy of Sciences, and at the general open session read a paper on "The Natural Focus of Human Trypanosmosis".

The conference adopted the following detailed resolution:

"The 10th Conference on the Natural Focus of Diseases and Parasitological Problems, organized by the USSR Academy of Sciences (Leningrad Zoological Institute) and the USSR Academy of Medical Sciences (Moscow Gamaleya Institute of Epidemiology and Microbiology) wholeheartedly concurs in the advisability of the organization by the two Academies above-mentioned of this conference for the purpose of joint consideration of the scientific investigations of the biological and medical institutions of the USSR. It emphasizes the necessity of closer ties in their work and further development of all-round cooperation in the study of the natural focus of human and animal diseases between zoologists (taxonomists, fauna specialists, ecologists, biocenologists and parasitologists) on the one hand and virologists, microbiologists, pathologists, epidemiologists and clinicians on the other. Only concerted efforts on the part of these specialists can give full and effective solution of the practical problems at fighting these diseases as well as of their prophylaxis. During the last 20 years the study of the natural focus of diseases has been quite active and has shown rapid development.

In view of the resolutions of the 21st Congress of KPSS [Communist Party of the Soviet Union] and the Seven-Year Plan for

the national economy of the USSR, the following should be the guiding principles and directions in the further study and investigation and prophylactic research in the field of the natural focus of diseases and the problems of general and special parasitology:

1. Full development of cooperative methods of investigating the various questions raised by the problem as a whole or its special aspects, taking advantage of modern investigatory techniques and methods and drawing upon the latest discoveries in physics, biophysics, chemistry and biochemistry. This, of course, calls for a supply of new apparatus equal to that of the leading scientific institutions.

2. Direct participation in sanitation work of all executive branches, active members of society, even the whole population. Making full use of the most advanced methods of sanitation education.

3. Development and practical application of new methods of field work and laboratory investigation; making use for this purpose of modern investigatory techniques (isotopes, electronic and luminescent microscopy, ultrasonic equipment, etc.).

4. Development of scientific principles and practical introduction of methods of epidemiological prognosis for natural focus and parasitic diseases and the prognosis of numbers of carriers and animals - pathogenic reservoirs, parasitic worms and their immediate hosts.

5. Development and practical introduction of new, more effective and more attainable ways and means of individual and general specific and non-specific prophylaxis, as well as ways and means of rendering harmless foci of diseases; practical introduction of successful methods of protection against blood-sucking carriers in the natural foci of diseases.

6. Development of new, more effective means and more expedient methods of discovering and diagnosing diseases, their causative agents and their carriers.

7. Full participation during the period of the Seven-Year Plan in sanitation work in city focal centers of leishmaniosis, rickettsial diseases, helminthiasis and acarid-bite encephalitis wherever found in the central oblasts of the USSR; joint efforts with veterinary institutions in sanitation work in pastureland foci of encephalitis diseases common to man and domestic animals; creation of model districts where the natural foci of diseases have been destroyed as a result of measures that successfully led to their elimination; creation of special services for maintaining in a harmless state territories that previously were centers of diseases.

8. Investigation into the laws governing the continuance and transmission of the causative agents in the natural focus diseases (inter-relationship between the pathogenic carrier and his hosts); the circulation of the causative agent among those suffering from biocenosis, the natural focus of disease; development of experimental epizootology in relation to geographic environment, climatic and microclimatic conditions, behavior of the host, etc., in this connection, it is necessary in every possible way to further the ecological and physiological investigations of blood-sucking arthropoda and parasitic worms, and studies of their life cycles; special attention should be paid to the existence of specific causes of a social character.

In order to bring to realization the points mentioned above, the following measures are essential:

1. Re-examination of the Seven-Year Plans for a more precise definition of requirements to meet the demands of local public health services, setting a definite time limit for fulfillment of tasks, distribution of available forces with a more precise definition of personal responsibility on the part of each worker for his assigned task.

2. The training of personnel to fill the need for specialists by utilizing all the facilities of central and local institutions, and raising the scientific qualifications of the present personnel.

3. Re-equipment of laboratories and organization of new laboratories in conformance with modern scientific needs.

4. The organization, in addition to the larger conferences, of symposiums and discussions on special narrower problems for cooperative formulation of the results of their investigations and their practical realization.

This conference appeals to all organizations and individual investigators who are doing research work in parasitology, natural focus of diseases and helminthology:

1. To cooperate in every possible way in these many-sided and complex investigations in order to reach more rapidly the fulfillment of our aims and realize their practical results.

2. To pay special attention to the necessity of immediately instituting curative and prophylactic measures as soon as an increase is discovered in natural focus diseases (for example, skin leishmaniasis, and others).

3. To widen the investigations of little studied but probable natural focus diseases (toesoplasmosis, listeriosis,

erysipeloid, pneumocistosis, and others) for a precise definition of their origin and nature of infection, and an indication of their natural foci.

4. To forward to the Zoological Institute AN-USSR reprints of their reports (or exact quotations from them) on studies of the natural focus of diseases, to make possible the compilation of a complete bibliography. Work is already going on in the Zoological Institute on the compilation of maps for the study of natural focus diseases. To make this work complete all those who are carrying on such investigations locally are asked to send to the Institute the appropriate data for inclusion in the general and full-scale atlas of maps for the whole Soviet Union.

The conference notes the quite unsatisfactory condition of the USSR campaign against mosquitoes and the protection of the population and agricultural animals against their attacks, and this in spite of the availability of scientifically based and proved ways and means both for fighting them and for prophylaxis. The conference considers it absolutely essential for the government to issue special decrees in the fight against mosquitoes with definite provisions for the following: effective measures for extermination of mosquitoes and protection against them; direct participation of executive bureaus in putting them into practice; the construction of special factories for the manufacture of approved mosquito repellents, chemical poisons and suitable apparatus; and specially trained personnel to carry out the work.

The conference calls to the attention of taxonomists and acarologists the necessity of developing methods of exact specific identification of live acarids, especially trombiculoid mites and chiggers in order to make it possible to establish experimentally their role in transmission of natural focus diseases as well as to study their biology.